Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended) A method of generating a continuous parametric model of an electronic circuit parameter having a base model of the form

$$A_{eff} = A_0 - \frac{1}{2}[(A_0 - A - \delta) + \sqrt{(A_0 - A - \delta)^2 + 4\delta A_0}].$$

, comprising the steps:

determining whether the base model exhibits at least one discontinuity over an allowable range of parameters;

if the base model exhibits at least one discontinuity, applying at least one compensation function to prevent the base model from exhibiting discontinuities over the allowable range of parameters;

determining whether the first derivative of the base model exhibits at least one discontinuity over the allowable range of parameters; and

if the first derivative of the base model exhibits at least one discontinuity, applying at least one compensation constant to prevent a first derivative of the base model from exhibiting discontinuities over the permissible parametric range.

Claim 2 (cancelled)

Claim 3 (currently amended) The method of claim ~~2~~ 1, wherein ~~the at least one~~ a compensation function is substituted into the base model in place of the constant term δ in the base model.

Claim 4 (original) The method of claim 3, wherein the ~~at least one~~ compensation function takes the form of $\theta(A_0) = \frac{A_0}{K}$.

Claim 5 (original) The method of claim 4, wherein the ~~at least one~~ compensation function further comprises a second compensation function which is substituted for the term A_0.

Claim 6 (original) The method of claim 5, wherein the second compensation function takes the form, $A_0^* = A_0 + \Delta\exp(-A_0^2)$, where Δ is a constant having a value ~~significantly~~ less than A_0.

Claim 7 (original) The method of claim 6, wherein the compensation constant Δ is applied to the base model and the resulting enhanced continuous parametric model is represented as

$$A_{eff} = A_0 - \frac{1}{2}\left\{ (A_0 - A - \theta - \Delta) + \sqrt{(A_0 - A - \theta)^2 + 4\theta A_0 + 2\sqrt{A_0^2}\,\Delta + 2\sqrt{\theta^2}\,\Delta + \Delta^2} \right\}.$$

Claim 8 (original) The method of claim 7, wherein A_{eff}, A_0 and A represent voltage parameters of an electronic component.

Claim 9 (original) The method of claim 7, wherein A_{eff}, A_0 and A represent current parameters of an electronic component.

Claim 10 (original) The method of claim 7, wherein A_{eff}, A_0 and A represent power parameters of an electronic component.

Claim 11 (original) A continuous parametric model of a physical circuit element comprising:

a base model, said base model defining a representation of the circuit element, said base model exhibiting at least one of a discontinuity over an allowable range of model parameters and a discontinuity in the first derivative of

the allowable range of model parameters, said base model of the form

$$A_{eff} = A_0 - \frac{1}{2}[(A_0 - A - \delta\} + \sqrt{(A_0 - A - \delta)^2 + 4\delta A_0}];$$

~~at least one~~ a compensation function to remove the discontinuities of the base model over the allowable range of parametric values; and

at least one compensation constant to prevent a first derivative of the base model from exhibiting discontinuities over the allowable range of parameters.

Claim 12 (cancelled)

Claim 13 (currently amended) The continuous parametric model ~~method~~ of claim ~~12~~ 11 , wherein the ~~at least one~~ compensation function is substituted into the base model in place of the constant term δ in the base model.

Claim 14 (currently amended) The continuous parametric model ~~method~~ of claim 13, wherein the ~~at least one~~ compensation function takes the form of $\theta(A_0) = \frac{A_0}{K}$.

15 (currently amended) The continuous parametric model ~~method~~ of claim 14, wherein the ~~at least one~~ compensation function further comprises a second compensation function which is substituted for the term A_0.

Claim 16 (currently amended) The continuous parametric model ~~method~~ of claim15, wherein the second compensation function takes the form $A_0^* = A_0 + \Delta \exp(-A_0^2)$, where Δ is a constant having a value ~~significantly~~ less than A_0.

Claim 17 (currently amended) The continuous parametric model ~~method~~ of claim 16, wherein the compensation constant Δ is applied to the base model and the resulting enhanced continuous parametric model is represented as

$$A_{eff} = A_0 - \frac{1}{2}\left\{ (A_0 - A - \theta - \Delta) + \sqrt{(A_0 - A - \theta)^2 + 4\theta A_0 + 2\sqrt{A_0^2}\,\Delta + 2\sqrt{\theta^2}\,\Delta + \Delta^2} \right\}.$$

Claim 18 (currently amended) The continuous parametric model ~~method~~ of claim 17, wherein A_{eff}, A_0 and A represent voltage parameters of an electronic component.

Claim 19 (currently amended) The continuous parametric model ~~method~~ of claim 17, wherein A_{eff}, A_0 and A represent current parameters of an electronic component.

Claim 20 (currently amended) The continuous parametric model ~~method~~ of claim 17, wherein A_{eff}, A_0 and A represent power parameters of an electronic component.